MIL-J-43904A

<u>4 September 1985</u>
SUPERSEDING
MIL-J-43904
31 December 1974

MILITARY SPECIFICATION

JUICE, GRAPE, INSTANT, SWEETENED

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 <u>Scope</u>. This document covers instant, sweetened, grape juice for "se by the Department of Defense as an item of general issue.

2. APPLICABLE DOCUMENTS

2.1 Government documents. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

SPECIFICATIONS

FEDERAL

TT-C-495 - Coatings, Exterior, for Tinned Food Cans
PPP-B-636 - Boxes, Shipping, Fiberboard
PPP-C-29 - Canned Subsistence Items, Packaging and
Packing Of
PPP-C-96 - Cans, Metal, 28 Gage and Lighter

MILITARY

MIL-L-1497 - Labeling of Metal Cans for Subsistence Items
MIL-L-35078 - Loads, Unit: Preparation of Nonperishable
Subsistence Items, General Specification For
MIL-D-43266 - Desiccants and Desiccation, Method of: for
Γackaging Subsistence

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Natick Research and Development Center, Natick, MA 01760-5014 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 8915

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

STANDARDS

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

MIL-STD-129 - Marking for Shipment and Storage

(Copies of documents required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

OTHER GOVERNMENT DOCUMENTS

Laws and Regulations

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder (21 CFR Parts 1-199)

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

U.S. DEPARTMENT OF AGRICULTURE (USDA)

U.S. Standards for Grades of Frozen Concentrated Sweetened Grape Juice

(Application for copies should be addressed to the Chief, Processed Products Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, DC 20250.)

U.S. Standards for Condition of Food Containers

(Application for copies should be addressed to the Director, Market Research and Development Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, DC 20250.)

2.2 Other publications. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

NATIONAL ACADEMY OF SCIENCES

Food Chemicals Codex

(Application for copies should be addressed to the National Academy Press, 2101 Constitution Avenue, N.W., Washington, DC 20418.)

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS (AOAC)

Official Methods of Analysis of the Association of Official Analytical Chemists

(Application for copies should be addressed to the Association of Official Analytical Chemists, 1111 North 19th Street, Suite 210, Arlington, VA 22209.)

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Traffic Department, 1616 P Street, N.W., Washington, DC 20036.)

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Suite 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

(Technical society and technical association documents are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document shall take precedence.

3. REQUIREMENTS

3.1 <u>Bid sample approval</u>. Twelve cans (unless otherwise specified, see 6.1), of at least 1 pound each, all of equal uniform quality and representative of the product which the bidder proposes to furnish, shall be submitted to the contracting officer. One or more samples (not less than 1 pound each) shall then be tested to determine whether the product has the desired subjective quality characteristics specified in 3.4. The remaining samples shall be stored at a temperature of 40°F or lower and used as a standard of reference for determining compliance of deliveries with the subjective quality requirements specified in 3.4.

Additional samples may be withdrawn from accepted lots of material when deemed necessary. The contracting officer's approval of the bid samples does not relieve the contractor from complying with all other requirements of the document not stipulated above.

- 3.2 <u>Ingredients</u>. All ingredients shall be clean, sound, wholesome, and free from foreign material, evidence of rodent or insect infestation, extraneous material, off-odors, off-flavors, and off-colors.
- 3.2.1 <u>Grape juice</u>. The grape juice shall be produced from clean, sound, properly matured Concord grapes and unless otherwise specified (see 6.1) shall be of the most recent season's pack. If concentrated Concord grape juice is used, essence or natural flavor from Concord grapes shall be used in the production of the instant sweetened grape juice.
- 3.2.2 Sweetening ingredient. Sweetening ingredient shall be white, refined granulated cane or beet sugar, dextrose, corn syrup or corn syrup solids, used singly or in combination, except that dextrose, corn syrup and corn syrup solids, if used, shall not exceed 1/2 by weight, of the total sweetening ingredient on a dry solids basis.

3.2.3 Optional ingredients.

- 3.2.3.1 Sodium sulfite or sodium bisulfite. Sodium sulfite or sodium bisulfite shall meet the requirements of the Food Chemicals Codex and may be added to the concentrated grape juice prior to dehydration in such quantity as to meet the requirements specified in 3.4.1.
- 3.2.3.2 <u>Drying aids</u>. Drying aids such as defoaming agents, foam stabilizers, vegetable gums or carboxymethylcellulose which have been approved by the Food and Drug Administration may be used in quantities permitted by that agency.
- 3.2.3.3 Tartaric, citric and malic acid. Tartaric, citric and malic acid shall meet the requirements of the Food Chemicals Codex.
- 3.2.3.4 Anticaking agents. Anticaking agents which have been approved by the Food and Drug Administration may be used in quantities permitted by that agency.

3.3 Processing.

- 3.3.1 Essence recovery. The juice shall be stripped of its essence and the essence concentrated. The essence stripping and concentration shall be carried out by methods which entail minimum loss of the volatile flavoring constituents. As an alternative to essence recovery, natural grape flavor may be recovered.
- 3.3.2 Concentration. The juice shall be depectinized, clarified and concentrated under vacuum.
- 3.3.3 Sweetening ingredient addition. The sweetening ingredient (on a dry solids basis) shall be added in quantities not greater than the grape juice soluble solids.

- 3.3.4 Acid addition. Tartaric, citric or malic acid or any combination thereof may be added in quantities to meet the requirements of 3.4.2.
- 3.3.5 <u>Dehydration</u>. The juice, sweetening ingredient mixture, and optional ingredients shall be mixed and dehydrated or dehydrated and then blended to produce a final product as specified in 3.4.
- 3.3.6 Essence or natural grape flavor addition. The concentrated essence shall be added to the grape juice and sweetening ingredient mixture to meet the requirements specified in 3.4.1. Alternatively, the concentrated essence or natural grape flavor may be entrapped and added in the form of cold water soluble flavor granules which have been prepared from one or more of the following ingredients: sucrose, dextrose, corn syrup, corn syrup solids, gum acacia, other suitable vegetable gums, glycerol and emulsifiers.
- 3.3 7 Processing equipment. All machinery, equipment and parts thereof, with which liquid materials may come into contact during processing, shall comply with 21 CFR Part 110 current good manufacturing practice.

3.4 Finished product.

- 3.4.1 Dehydrated product. The instant grape beverage shall be free flowing and free from lumps which cannot be broken by slight hand pressure. The moisture content shall not exceed 2.5 percent at time of pack, and shall not exceed 1.5 percent within 21 days after packaging. When essence has been added, 100 grams of instant grape beverage solids shall contain not less than 7.5 mg of volatile esters (calculated as ethyl acetate). If sodium sulfite or sodium bisulfite has been used, the sulfur dioxide content of the dehydrated product shall be not less than 100 ppm nor more than 250 ppm on a dry solids basis.
- 3.4.2 Rehydrated product. The product shall rehydrate without undue agglomeration when 4.75 avoirdupois ounces of grape beverage solids (moisture-free) is rehydrated with 30 fluid ounces of water $(40^{\circ}$ to 60° F). The rehydrated product shall possess a fine distinct Concord grape juice flavor and be free from any objectionable flavors or odors. The rehydrated product shall conform to the following requirements.

	Minimum	Maximum
Acid (calculated as citric, g/100 mL)	0.34	0.55
Brix-acid ratio	23 to 1	40 to 1
Absorbency at 520 millimicrons	4.0	-
Absorbency ratio	1.5	_

3.4.3 Palatability. The product shall be equal to or better than the approved bid sample in palatability and overall appearance.

- 3.5 Plant qualification. The product shall be prepared, processed and packaged in establishments meeting the requirements of Title 21, Code of Federal Regulations, Part 110, "Current Good Manufacturing Practice in Manufacturing, Processing, Packaging or Holding of Human Foods", and the plant sanitation requirements of the appropriate Government inspection agency.
- 3.6 <u>Federal Food, Drug, and Cosmetic Act</u>. All deliveries shall conform in every respect to the provisions of the Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder.

4. QUALITY ASSURANCE PROVISIONS

- 4.1 Contractor's responsibility. Inspection and acceptance by the USDA shall not relieve the contractor of obligation and responsibility to deliver a product complying with all the requirements of this document. The contractor shall assure product compliance prior to submitting the product to the USDA for any inspection.
- 4.2 <u>Inspection and certification</u>. Product acceptability shall be determined by the USDA. The USDA will determine the degree of supervision necessary to assure compliance with the requirements of this document.
- 4.3 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.
- 4.3.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this document or applicable purchase document.
- 4.3.1.1 <u>Ingredient and component examination</u>. Conformance of ingredients and components to identity, condition and other requirements specified in 3.2 shall be certified by the ingredient supplier or ingredient manufacturer, or compliance be evident by examination of pertinent labels, markings, U.S. Grade Certificates, certificates of analyses or other such supplier-furnished valid documents acceptable to the inspection agency. In addition, prior to use, each ingredient shall be examined organoleptically, as necessary, to determine conformance to the condition requirements. Any nonconformance to an identity, condition, or other requirement shall be cause for rejection of the ingredient lot or component lot or of any involved product.
- 4.3 1.2 <u>Unfilled can inspection</u>. Conformance of unfilled cans to the requirements specified in 5.1.1 shall be determined by examination of certificates of conformance or of other valid documents. Any nonconformance shall be cause for rejection of the can lot or of any involved product.
- 4.3.2 <u>In-process examination</u>. In-process examination shall be performed to determine conformance to the processing, desiccant addition, and unit packing requirements. Any nonconformance revealed by actual examination or by review

of records of calculation of desiccant amounts or by review of other valid documents shall be cause for rejection of the involved product.

- 4.3.3 Moisture determination at time of pack. Eight cans of product shall be randomly selected from the lot at time of pack. The moisture content of the product from each can shall be determined in accordance with the Official Methods of Analysis of the Association of Official Analytical Chemists; Chapter: Sugar and Sugar Products, Method; Moisture in Sugars, Vacuum Drying; except that the temperature shall be 60°C and a permitted alternative to redrying every hour is to dry for a consecutive 16 hours, cool in a desiccator, and weigh. Any failure to conform to the moisture requirement in 3.4.1 shall be classified as a major defect and shall be cause for rejection of the lot.
- 4.3.4 Moisture determination within 21 days after packaging. Eight cans of product shall be randomly selected from the lot after packaging. The moisture content of the product from each can shall be determined within 21 days after packaging in accordance with 4.3.3. The contractor shall indicate the minimum length of time within the 21 day period that the cans are to be held prior to testing. Any failure to conform to the moisture requirement in 3.4.1 shall be classified as a major defect and shall be cause for rejection of the lot.
- 4.3.5 Net weight examination on a dry solids basis. Examination shall be made during packaging to determine compliance with the fill requirement of 5.1.1. Any individual sample unit having a net weight on a dry solids basis of less than 19.0 ounces shall be scored as a minor defect. The moisture content of the composite (taken at time of packaging and tested in accordance with 4.3.3) representing the lot in question shall be used to make this determination. If moisture test results are not available at time of packaging, reserve computations until test results become available. Net weight results shall be recorded to the nearest 0.1 ounce. The lot size shall be expressed in units of cans. The sample unit shall be one filled can without desiccant. The inspection level shall be S-3 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5.
- 4.3.6 <u>Product examination</u>. The finished product shall be examined for the defects listed in table I. The lot size shall be expressed in cans. The sample unit shall be the contents of one filled and sealed can. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 1.5 for major defects and 6.5 for minor defects.

TABLE I. Product defects 1/2/

Category	Defect
Major Minor	Desiccant
101	Desiccant bag missing.
102	Desiccant bag has tear, hole, or open seal.

TABLE I. Product defects 1/2/

Catego	гу	Defect
Major	Minor	Desiccant (cont'd)
	201	Desiccant bag folded over itself.
		Dehydrated product
103		Lumps that cannot be broken up by slight hand pressure.
104		Not free flowing.
		Rehydrated product 3/
105		Undue agglomeration on rehydrating.
106		Presence of sediment or residue particles.
107		Particles of skin, seed, or other defects.

^{1/} The presence of any foreign material (e.g. glass, dirt, insect parts, hair, wood, metal, etc.), foreign odor or flavor (e.g. burnt, scorched, moldy, rancid, sour, stale, etc.), or foreign color shall be cause for rejection of the lot.

^{2/} Product not equal to or better than the approved bid sample in palatability and overall appearance shall be cause for rejection of the lot. (This comparison shall be performed only when deemed necessary by an AMS agent.)

³/ Rehydrate 4.75 ounces of solids with 30 fluid ounces of water (40° to 60° F). Make one determination per sample unit.

^{4.3.7} Product testing. The finished product shall be tested for the characteristics specified in table II. The lot size shall be expressed in cans. The sample shall be a 1-pound composite derived from the number of cans indicated by inspection level S-2. Any test failure shall be cause for rejection of the lot.

TABLE II. Product tests

Characteristic	Requirement paragraph	Test method	Report results to nearest
Volatile esters (when applicable)	3.4.1	4.4.1	0.1 mg/100g
Sulfur dioxide (when applicable)	3.4.1	4.4.2	1 ppm
Acıd	3.4.2	4.4.3	1/ 0.01 g/100mL
Brix-acid ratio	3.4.2	4.4.3	1/ 0.1
Absorbency at 520 millimicrons	3.4.2	4.4.3	1/ 0.1
Absorbency ratio	3.4.2	4.4.3	<u>1</u> / 0.1

^{1/} The test shall be performed on product rehydrated in the ratio of 4.75 ounces of dry product to 30 fluid ounces of water at 40° to 60° F.

4.3.10 Shipping container examination. When shipping containers are required to be in accordance with PPP-B-636, examination for defects in assembly, closure and reinforcement shall be in accordance with the appendix of PPP-B-636. In addition, the following defects shall be classified as follows:

Major: National stock number, item description, contract number or date of pack markings missing, incorrect, or illegible.

Number of cans not as specified.

Reinforcement with nonmetallic strapping or tape is not used.

Minor Other required markings missing, incorrect, or illegible.

Tiered cans not separated as specified for level A packing.

Container not snug-fitting.

Arrangement of cans not as specified

Level C shipping containers shall be examined for the marking, arrangement, and number of cans defects specified above.

^{4 3.8 &}lt;u>Can condition examination</u>. Examination of filled and sealed cans shall be in accordance with the United States Standards for Condition of Food Containers, except that inspection for labeling shall be in accordance with MIL-L-1497 (see 5.4).

^{4.3.9 &}lt;u>Leakage inspection</u>. Inspection for leakage shall be in accordance with PPP-C-29 (see 5.1.1).

- 4.3.11 Unit load inspection. Inspection of unit loads shall be in accordance with quality assurance provisions of MIL-L-35078.
 - 4.4 Methods of inspection.
- 4.4.1 <u>Volatile esters test</u>. Test for volatile esters shall be performed as follows:

Equipment

- a. Liter round bottom 24/40 \$ flask or 800-mL Kjeldahl flask
- b. Liter volumetric flask
- c. 500-mL volumetric flask
- d. 100-mL volumetric flasks
- e. 400-mL beaker (ice bath)
- f. 2, 5, 10, 20 and 50-mL pipettes
- g. 50-mL Erlenmeyer flasks or test tube type cuvettes
- h. 25, 50, 250 and 500-mL graduated cylinders
- 1. Glass delivery tube, 2-4 mm orifice
- 1. 300-mL Liebig condenser 24/40 \$\footnote{\sigma}\$ both ends (desirable)
- k. Boiling chips (carborundum or glass beads)
- 1. Spectrophotometer and tubes

Reagents

- a. 13.9% hydroxylamine hydrochloride 13.9 g of the reagent made to 100 mL with distilled H₂O in volumetric flask.
- b. 3.5 N NaOH 14 g of NaOH made to 100 mL with distilled H₂O in volumetric flask.
- c. 4 N HCl 34 mL conc. HCl made to 100 mL with distilled H2O in volumetric flask.
- d. 10% FeCl. 6 H₂O in N HCl 10 g made up to 100 mL with 0.1 N HCl in volumetric flask.
- e. Ethyl acetate standards weigh 1.00 g pure ethyl acetate into liter volumetric flask. (Use 150 mL beaker covered with watch glass. After putting in 1 g sample, dilute immediately with H₂O and transfer to liter volumetric flask).

Pipette 50 mL of the above solution into 500 mL volumetric flask containing about 400 mL $_{120}$ and make to volume. Pipette 10, 20, 30, 40 and 50 mL into round bottom distilling flasks containing 200 mL of distilled $_{120}$. Distill 50 mL into 100 mL volumetric flasks (chilled in ice and $_{120}$) containing 20 to 40 mL $_{120}$ (400 mL beaker ideal for ice bath). The distillate shall be delivered below the surface of the receiving water by means of the glass delivery tube.

Procedure

a. *Weigh 30.00 g sample into liter round bottom 24/40 \$ flask or 800 mL Kieldahl flask; add 200 mL of High and boiling chips (carborundum or glass

- beads) and distill volatile esters into 100 mL volumetric flask (chilled in ice and $\rm H_{2}O$) containing 20 to 40 mL $\rm H_{2}O$ (400 mL beaker ideal for ice bath). The distillate shall be delivered below the surface of the receiving water by means of the glass delivery tube. All glass distilling unit, using 300 mm Liebig condenser 24/40 % both ends, is preferred.
- b. Distill 50 mL into chilled 100 mL volumetric flask and make to volume at room temperature.
- c. Use 50 mL Erlenmeyer flask or test tube type cuvettes. Pipette 5 mL of sample or standard and 2 mL of hydroxylamine reagents into cuvette or flask, shake and immediately add 2 mL of NaOH reagent and shake again.
- d. Allow to stand 5 minutes; add 2 mL HCl reagent, shake; after 2 minutes add 2 mL (pipette) of ferric chloride reagent and shake.
 - e. After 2 minutes, pour into spectrophotometer tube and read at 540 mu.
- f. Concentration of the volatile ester is calculated by referring to the standard curve. The ester content is expressed as mg of ethyl acetate/100 g of sample solids.
- *NOTE: If samples foam at first boiling, turn off heat until sample stops foaming, then turn on heat again.
- 4.4.2 <u>Sulfur dioxide content test</u>. When sodium sulfite or sodium bisulfite has been added, the sulfur dioxide content of the product shall be determined in accordance with the Official Methods of Analysis of the Association of Official Analytical Chemists; Chapter: Food Additives; Direct, Method: Sulfurous Acid (Total) in Food; Modified Monier Williams Method.
- 4.4.3 Acid, Brix-acid ratio, absorbency and absorbency ratio tests. Acid, Brix-acid ratio, absorbency and absorbency ratio shall be determined by the methods specified in the US Standards for Grades of Frozen Concentrated Sweetened Grape Juice except acid which is to be calculated as citric acid.

PACKAGING

- 5.1 <u>Preservation</u>. The product shall be preserved in accordance with level A or C, as specified (see 6.1).
- 5.1.1 Level A. Not less than 19 ounces of the finished product, on a dry solids basis, shall be filled into a size 401 by 411 or 401 by 602 open-top style, round, metal can with soldered or welded side seam and compound-lined, double-seamed ends. The can shall be made throughout from not less than commercial 0.25-pound electrolytic tin plate per base box and shall be coated on the outside with a coating conforming to type I of TT-C-495. Each can shall be provided with sufficient desiccant complying with MIL-D-43266 to

reduce the moisture content to 1.5 percent. The amount of desiccant required shall be calculated from the formula specified in MIL-D-43266 except that the value for percent water as used in the formula shall be the actual percent moisture content of the product, minus 1.5 percent. A record of the calculations shall be maintained. The hermetically sealed cans shall not leak when subjected to the procedures for determining leakage in PPP-C-29.

- 5.1.2 Level C. The product shall be unit-packed as specified in 5.1.1, except that cans with or without commercial exterior coating will be acceptable. Alternatively, cans may be made from 0.20 pound per base box electrolytic tin plate with an exterior commercial coating.
- 5.2 Packing. Twenty-four cans of the product, arranged 4 in length, 3 in width and 2 in depth, shall be packed on end in a snug-fitting shipping container complying with level A, B, or C, as specified (see 6.1).
- 5.2.1 Level A packing. Each shipping container shall be a snug-fitting fiberboard box, constructed and closed in accordance with style RSC, grade V2s of PPP-B-636. Tiers of cans shall be separated by a fiberboard pad. Each fiberboard box shall be reinforced with nonmetallic strapping or pressuresensitive adhesive filament-reinforced tape in accordance with the appendix of PPP-B-636. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.1). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.
- 5.2.2 <u>Level B packing</u>. The shipping container shall be a fiberboard box, constructed and closed in accordance with style RSC, V3c, V3s, or V4s, of PPP-B-636. Each fiberboard box shall be reinforced with nonmetallic strapping or pressure-sensitive filament-reinforced tape in accordance with the appendix of PPP-B-636.
- 5.2.3 <u>Level C packing</u>. The shipping container shall be in accordance with the National Motor Freight Classification or Uniform Freight Classification, as applicable.
- 5.3 Unit loads. When specified (see 6.1), the product, packed as specified in 5.2.2 and 5.2.3, shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified. When unit loads are strapped, the strapping shall be limited to nonmetallic strapping.
 - 5.4 Labeling and marking.
- 5.4.1 Cans. Cans shall be labeled in accordance with MIL-L-1497. In addition, the following directions for use shall be included on the label:

GRAPE JUICE, INSTANT, SWEETENED

Preserved with Sulfur Dioxide (when applicable)

Directions for use

IMPORTANT: DISCARD DESICCANT BAG

<u>Discard Desiccant Bag</u>. Place contents in a gallon measure and add water, while stirring. Makes one-half gallon of sweetened grape juice or one gallon (16 servings) of grape juice drink.

- 5.4.2 Shipping containers. Shipping containers shall be marked in accordance with MIL-STD-129.
- 5.4.3 <u>Unit loads</u>. Unit loads shall be marked in accordance with MIL-L-35078.
 - 6. NOTES
 - 6.1 Ordering data. Acquisition documents should specify the following:
 - a. Title, number, and date of this document.
 - b. When other than 12 cans of bid sample is required (see 3.1).
 - c. When other than most recent season's pack is required (see 3.2.1).
 - d. Levels of preservation and packing required (see 5.1 and 5.2).
 - e. Type and class of unit load when unit loading is required (see 5.2.1 and 5.3).
- 6.2 Appropriate level of pack. Based on conditions known or expected to be encountered during shipment, handling and storage of the specific item being procured, the procuring activity should select the appropriate level of pack in accordance with the criteria established in AR 700-15/NAVSUPINST 4030.28/AFR 71-6/MCO 4030.33A/DLAR 4145.7.
- 6.3 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:

Preparing activity:

Army - GL

Army - GL

Navy - SA Air Force - 50

Project No. 8915-0783

Review activities:

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DP - SS

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NAME OF BUSMITTING OR	BANIZATION	4 TYPE OF ORGANIZATION (Merk one) VENDOR
ADDRESS (Street, City, State, EIP Code)		MANUFACTURER
		OTHER (Specify)
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